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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/707,322 | 12/05/2003 | Michael Ben Sellers | 140808MG (GEMS 0232 PA) | 1321 |
| 27256 | 7590 | 05/05/2004 | EXAMINER | |
| ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034 | | | ARANA, LOUIS M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2859 | |

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/707,322

Applicant(s)

SELLERS, MICHAEL BEN

Examiner

Louis M. Arana

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003 and 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 9-16 and 26-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, claims 1-16 and 23-31 in Paper No. 3/31/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 17-22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 3/31/04.

Drawings

3. The drawings are objected to because all rectangular boxes in Fig. 1 should be labeled. See 37 CFR 1.83(a). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-3, 6-8 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eberler et al. P.N. 6,100,693 (Eberler) in view of Nerreter P.N. 6,525,537.

Eberler discloses a RF body coil for a MRI apparatus. At least one component of the RF body coil is fashioned as a cooling conduit for circulating a coolant. See for example, Fig. 5 and 7 and claim 12.

The only difference between the prior art as represented by Eberler and the claims at issue is that Eberler is silent about the use of his invention for maintaining the patient bore below a minimum temperature.

This difference however, would have been obvious to the artisan of ordinary skill in the art in view of the teachings of Nerreter and Eberler himself. The person of ordinary skill would recognize the desire to maintain the patient bore below a maximum desired temperature given the heating produced by the gradient coils. See Nerreter col. 1, lines 32-39. Given that RF coils also produce heat and the same cooling circuit that is used for the gradient coils can be used for the RF coils. See Eberler, col.2 lines 12-22. The person of ordinary skill would advantageously maintain the temperature as in Nerreter with a body coil such as Eberler, resulting in the instant invention as claimed.

Allowable Subject Matter

6. Claims 4-5, 9-16 and 26-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaindl et al. discloses a directly cooled gradient coil system. Note the coil assembly construction and the description of the prior art at col. 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis M. Arana whose telephone number is (571) 272-2236. The examiner can normally be reached on M-Thurs. Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F Gutierrez can be reached on (703) 308-3875. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Louis M. Arana
Primary Examiner
Art Unit 2859

lma
4/28/04